

Application Development
for
Microsoft® Windows Mobile™
version 5.0

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Developer Platform Overview

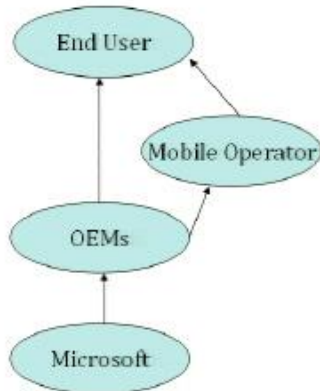
- Background
- Platform details
- Demonstrations
- Roadmap

What “is” the Development Platform

End-to-end experience
for developers targeting Windows Mobile

Business Model

- Not sold to end users
- Third party controls
 - Updates
 - Root certificate stores – impacts ISVs



Customer Touch



Customer Touch



Origin & History

More Device Choices	 2000	 2002	 2003	 2003 <i>Second Edition</i>	Windows Mobile Version 5.0 "Magneto"
Core OS	WinCE 3.0	WinCE 3.0	WinCE 4.2	WinCE 4.2	WinCE 5.01 "Browns"
Better Development	eVC 3 (C++) eVB 3 (VB)	eVC 3 (C++) eVB 3 (VB)	eVC 3 (C++) eVC 4 (C++) VS.NET 2003 (C#, VB.NET)	eVC 3 (C++) eVC 4 (C++) VS.NET 2003 (C#, VB.NET)	Visual Studio 2005 (C#, VB.NET, C++) ARM emulator
Richer Platform Capabilities	MFC 3.0 Win32, PDM	WinCE, ATL 3.0 Active Sync Connection Mgr. MAPI OBEX Telephony	.NET CF Emul. x86 Emulator Configuration Mgr. Bluetooth, SMS	.NET CF SP2 VGA (PPC) Square (PPC) Landscape (PPC) QVGA (SP)	.NET CF v1sp3, 3.0 MFC 8.0, ATL 8.0 Managed code libraries Notification broker, Camera, SQL Mobile, D3DM

Platform Details

Platform



Orange = Added/Enhanced in Future Windows Mobile Platform

* = Managed wrappers

Developer Setup

Windows Mobile 2003 SE

- ActiveSync 3.71
- eVC 4.0 & sp4
- VS .NET 2003
- PPC & SP SDKs, (extends eVC and VS)
- Dev Resource Kit for SE
- PPC & SP emulators for SE
- Windows CE tools for Visual Studio .NET 2003
- Developer Power Toys for Windows Mobile

Windows Mobile 5.0

- Visual Studio 2005
- Active Sync 4.0 (required for device only)
- WM 5.0 "SDKs" (extend VS)
 - Two separate packages – most components the same,
 - Moving to one in Photon release

Developer Tools

Visual Studio 2005 beta 2 + WM SDK

- Unified, high fidelity design experience
- New ARM emulator engine, ActiveSync functionality, multiple saved states
- New managed/native debuggers
- Remote tools

Windows Mobile

New for *Magneto*

- State & Notifications, native/managed
- OmOm, native/managed, (formerly POOM)
 - SelectContact
- MAPI, managed
- TAPI, managed
- Configuration Manager, native/managed
- PicturePicker, native/managed
- New DirectX port to CE, (in addition to existing GAPI), includes managed wrappers
 - D3D mobile
 - DDraw
 - DShow
- Unified installer
- Uniform security model

Net CF v2

What is new?

Performance	<ul style="list-style-type: none">• Unified JIT• Improved Strings• New XML Classes
Com Interop	<ul style="list-style-type: none">• Runtime callable wrappers,• Integrated into VS Shell
Language features	<ul style="list-style-type: none">• Generics• Anonymous methods• Partial Classes
D3D	<ul style="list-style-type: none">• Managed wrappers

Net CF v2

What is new? (cont'd)

New UI controls

- DateTime Picker
- MonthCalendar
- DocumentList
- LinkLable
- Notification Bubble
- Help
- WebBrowser
- DataContainer
- UserControl

CF v1 compatible

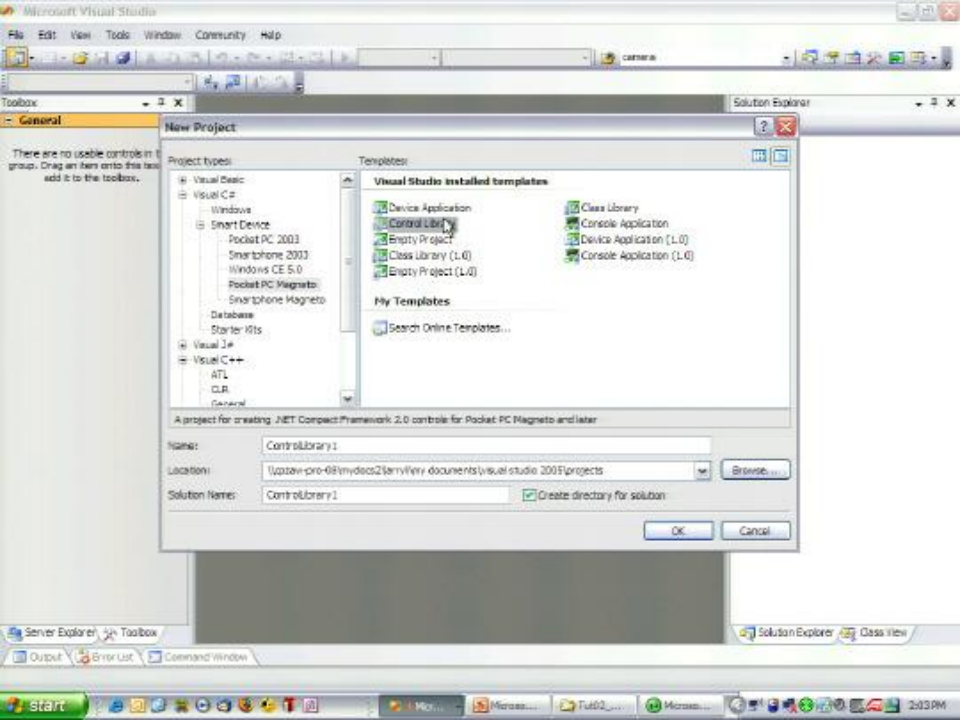
- Side by Side
- App compat

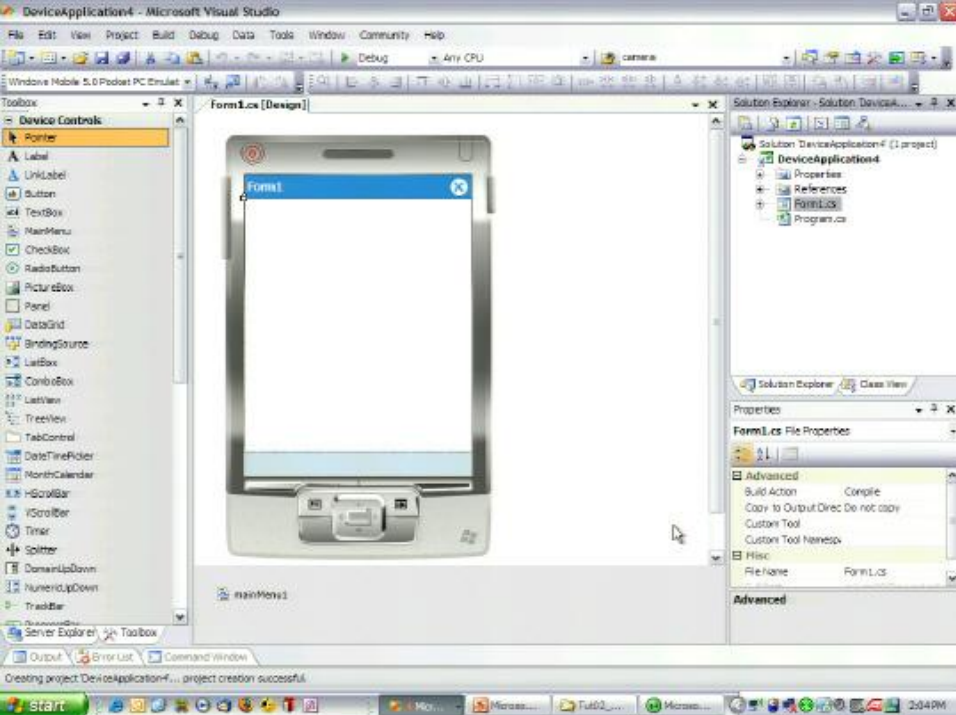
Win CE 5.0

What is new?

- Image Update FS
- Server Redistributables
 - Peernet
 - HTTP/d (updated)
 - MSMQ, (client/server) (updated)
 - UPnP
- GPS driver api

Demo







 maishment

[mainMenu](#)



The screenshot displays the Microsoft PowerPoint 2003 interface. The **Device Emulator Manager** window is open, showing a list of available emulators under the **Desktop** category:

- Windows CE 5.0
- Pocket PC 2003
 - Pocket PC 2003 SE Emulator
 - Pocket PC 2003 SE VGA Emulator
 - Pocket PC 2003 SE Square Emulator
 - Pocket PC 2003 SE Square VGA Emulator

The main slide area contains a list of emulators under the **Others** category:

- Windows Mobile 5.0 Pocket PC Phone VGA Emulator
- Windows Mobile 5.0 Pocket PC Square Emulator
- Windows Mobile 5.0 Pocket PC Phone Square Emulator
- Windows Mobile 5.0 Pocket PC Square VGA Emulator
- Windows Mobile 5.0 Pocket PC Phone Square VGA Emulator

The **Slide Layout** task pane on the right shows various layout options under **Text Layouts**, **Content Layouts**, and **Text and Content Layouts**. The **Show when inserting new slides** checkbox is checked.

The status bar at the bottom indicates "Slide 15 of 20" and "Custom Design". The Windows taskbar at the very bottom shows the Start button and several open applications, with the system clock displaying 2:14 PM.



Dem

tle

Available Emulators:

Refresh

Detectone

- Windows CE 5.0
- Pocket PC 2003
 - Pocket PC 2003 SE Emulator
 - Pocket PC 2003 SE VGA Emulator
 - Pocket PC 2003 SE Square Emulator
 - Pocket PC 2003 SE Square VGA Emulator
- Smartphone 2003
 - Smartphone 2003 SE Emulator
 - Smartphone 2003 SE QVGA Emulator
- Windows Mobile 5.0 Smartphone SDK
 - Windows Mobile 5.0 Smartphone Emulator
 - Windows Mobile 5.0 Smartphone QVGA Emulator
- Windows Mobile 5.0 Pocket PC SDK
 - Windows Mobile 5.0 Pocket PC Emulator
 - Windows Mobile 5.0 Pocket PC Phone Emulator
 - Windows Mobile 5.0 Pocket PC VGA Emulator
 - Windows Mobile 5.0 Pocket PC Phone VGA Emulator
 - Windows Mobile 5.0 Pocket PC Square Emulator
 - Windows Mobile 5.0 Pocket PC Square VGA Emulator
 - Windows Mobile 5.0 Pocket PC Phone Square VGA Emulator

Others

Available Emulators:

Refresh

Database

Windows CE 5.0

Pocket PC 2003

Pocket PC 2003 SE Emulator

Pocket PC 2003 SE VGA Emulator

Pocket PC 2003 SE Square Emulator

Pocket PC 2003 SE Square VGA Emulator

Smartphone 2003

Smartphone 2003 SE Emulator

Smartphone 2003 SE QVGA Emulator

Windows Mobile 5.0 Smartphone SDK

Windows Mobile 5.0 Smartphone QVGA Emulator

Windows Mobile 5.0 Pocket PC SDK

Windows Mobile 5.0 Pocket PC Emulator

Windows Mobile 5.0 Pocket PC Phone Emulator

Windows Mobile 5.0 Pocket PC VGA Emulator

Windows Mobile 5.0 Pocket PC Phone VGA Emulator

Windows Mobile 5.0 Pocket PC Square Emulator

Windows Mobile 5.0 Pocket PC Phone Square Emulator

Windows Mobile 5.0 Pocket PC Square VGA Emulator

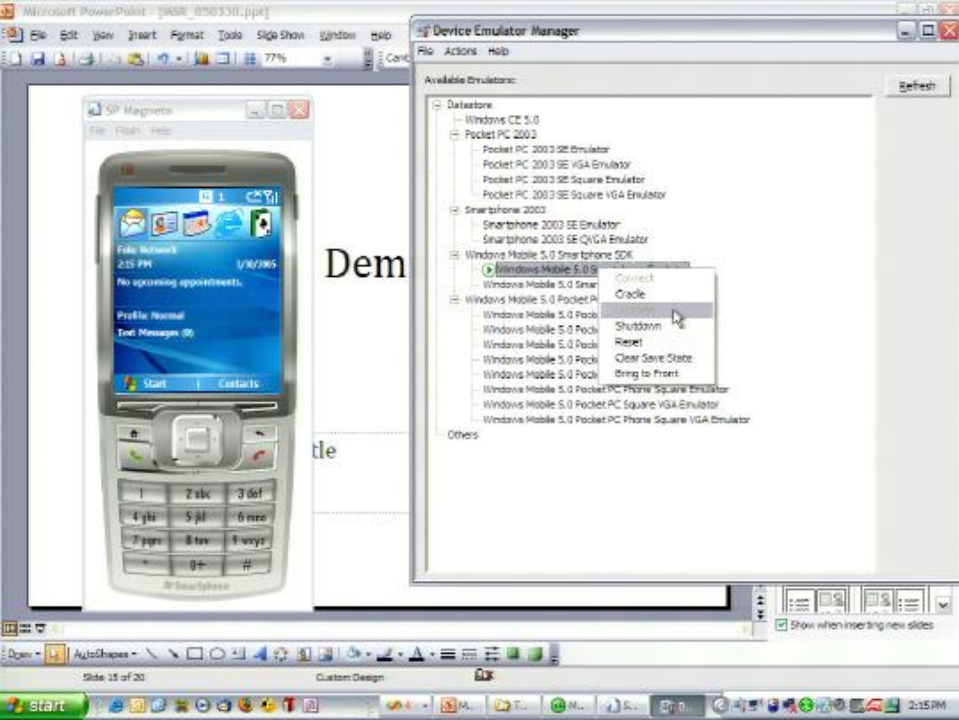
Windows Mobile 5.0 Pocket PC Phone Square VGA Emulator

Others



Dem

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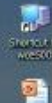




Recycle Bin



TokPac



SharePoint Workspace

MSR_0001

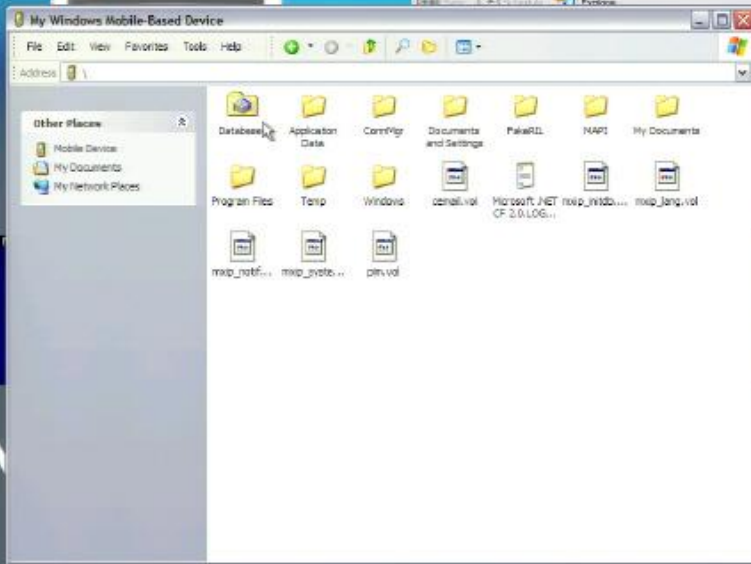


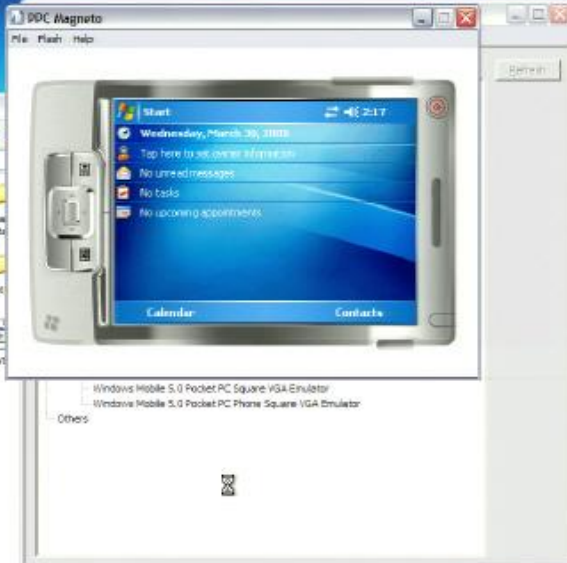
VAIO





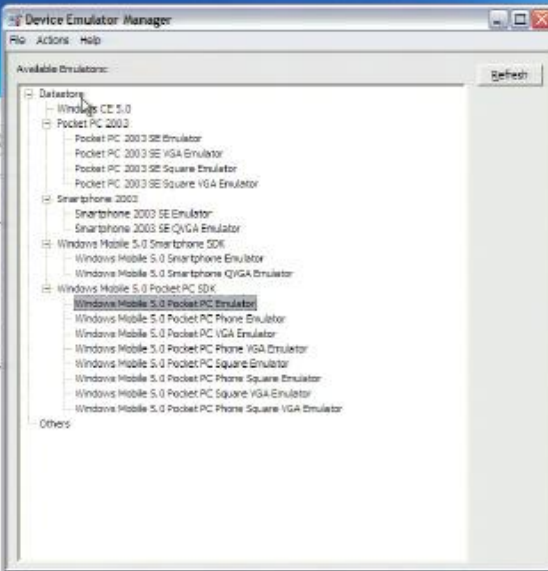
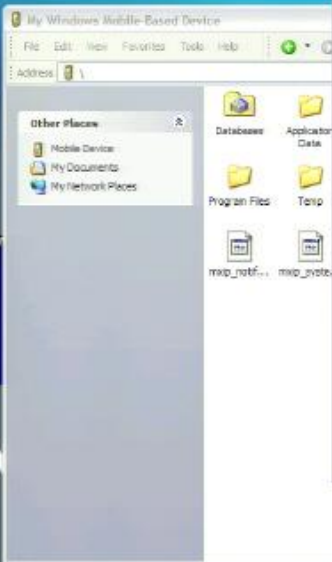
Recycle Bin

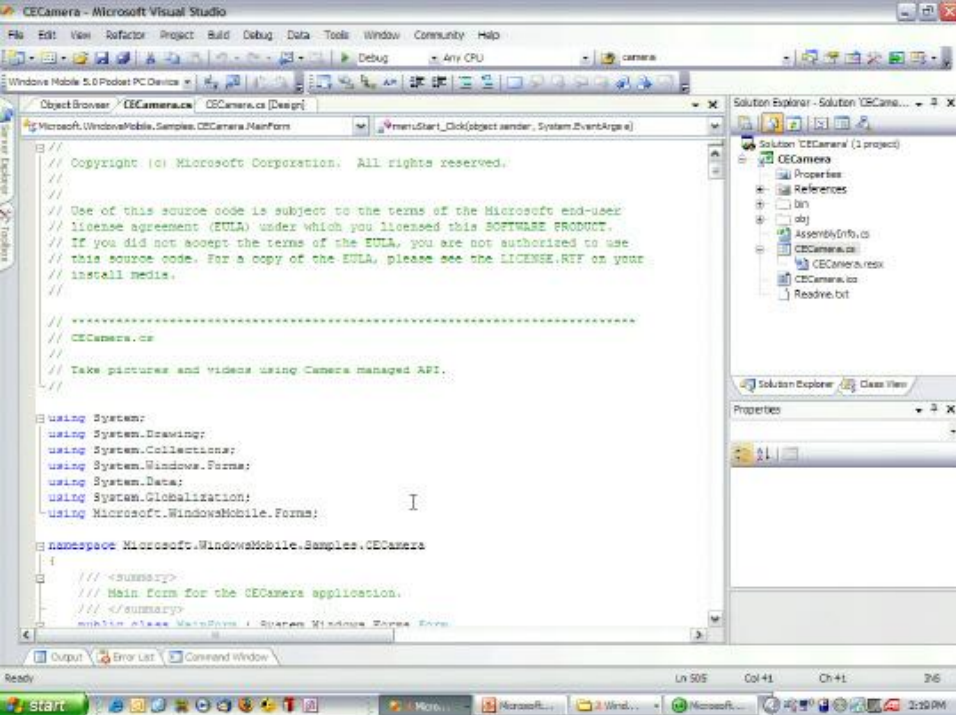


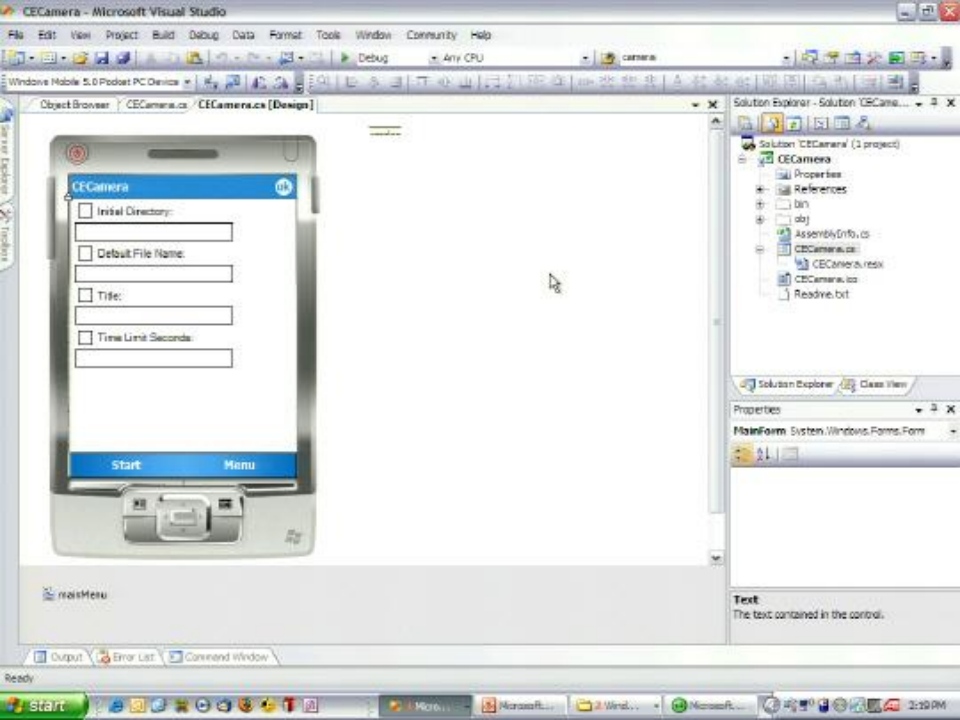


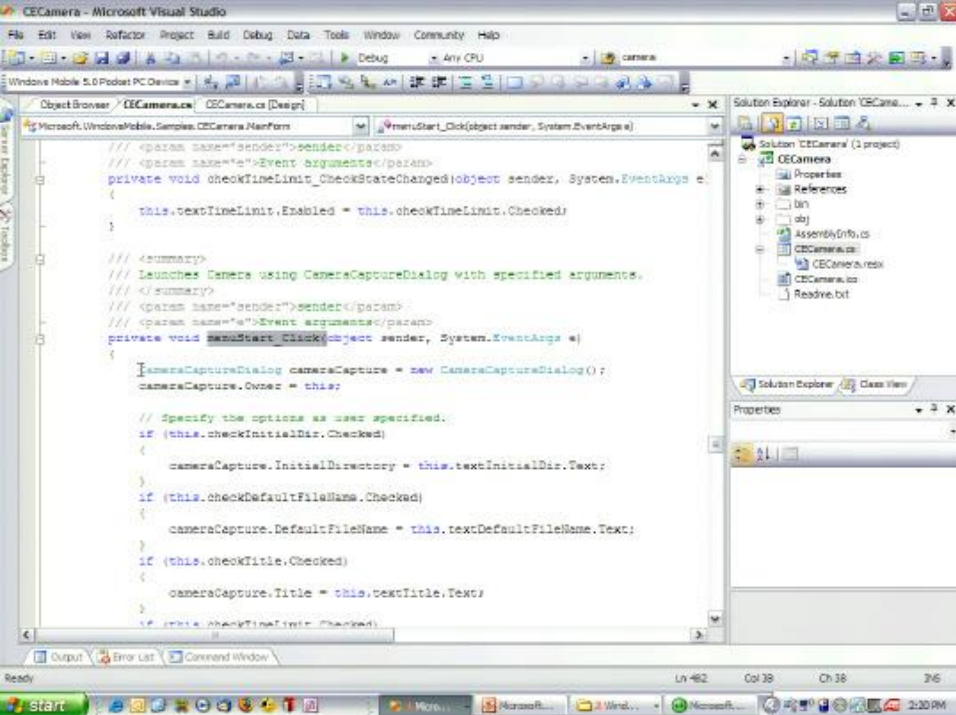
Windows Mobile 5.0 Pocket PC Square VGA Emulator
Windows Mobile 5.0 Pocket PC Phone Square VGA Emulator
Others













Start 4G 2:22
Wednesday, March 30, 2005

Tap here to set owner information

Text Messages: 1 Unread

Outlook E-mail: 8 Unread

3 Active tasks

Updated: MSR (+ academic)

Magneto talk

11:59PM-3:00PM (11/3/10/21) MSR Large...

Location: View in Files/CECamera

Contacts

Phone

Pocket PC

Start

Wednesday, March 30, 2005

Tap here to get owner information

Text Messages: 1 Unread

Outlook E-mail: 8 Unread

3 Active tasks

Updated: MSR (+ academic)

Magneto talk

1:15PM-3:00PM (11/10/21) MSR Large...

GO LIVE

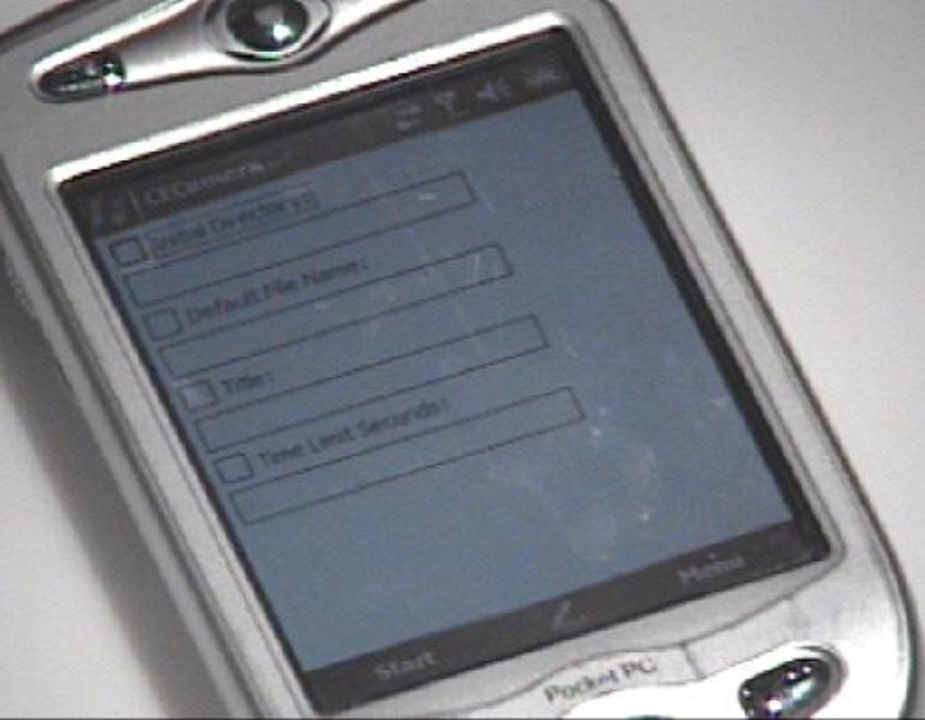
3:00PM-3:30PM

Bluetooth headset mode is disabled

Contacts

Phone

Pocket PC



CECamera

☐ Initial Directory is

☐ Default File Name:

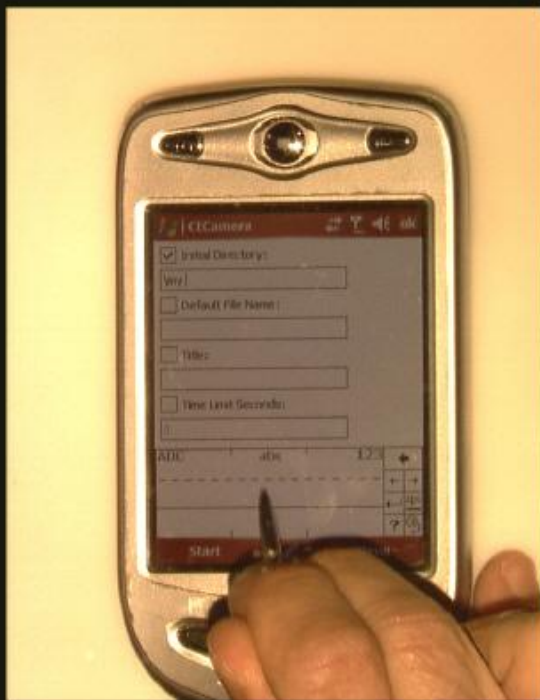
☐ Title:

☐ Time Limit Seconds:

Start

Pocket PC

Menu



CECamera - Microsoft Visual Studio

File Edit View Project Build Debug Data Tools Window Community Help

Debug Any CPU camera

Windows Mobile 5.0 Pocket PC Device

Object Browser CECamera.cs [Design]

Microsoft.WindowsMobile.Samples.CECamera.MainForm

MenuItemStart_Click(object sender, System.EventArgs e)

```
// There is not enough memory to save the image or video;
MessageBox.Show(ex.Message, windowCaption, MessageBoxButtons.OK,
    MessageBoxIcon.Hand, MessageBoxDefaultButton.Button1);
}
catch (InvalidOperationException ex)
{
    // An unknown error occurred.
    MessageBox.Show(ex.Message, windowCaption, MessageBoxButtons.OK,
        MessageBoxIcon.Hand, MessageBoxDefaultButton.Button1);
}
}

/// <summary>
/// Checks the selected menu item of Mode.
/// </summary>
/// <param name="sender">sender</param>
/// <param name="e">Event arguments</param>
private void menuModeStill_Click(object sender, System.EventArgs e)
{
    for (int i = 0; i < this.menuMode.MenuItems.Count; i++)
    {
        this.menuMode.MenuItems[i].Checked = false;
    }
    this.menuModeStill.Checked = true;
}

/// <summary>
/// Checks the selected menu item of Mode.
/// </summary>
/// <param name="sender">sender</param>
/// <param name="e">Event arguments</param>
```

Solution Explorer - CECamera

Solution CECamera (1 project)

- CECamera
 - Properties
 - References
 - Microsoft.WindowsMobile.Forms
 - mscorlib
 - System
 - System.Data
 - System.Drawing
 - System.Windows.Forms
 - System.Xml
 - bin
 - obj
 - AssemblyInfo.cs
 - CECamera.cs

Solution Explorer Class View

Properties

CECamera

- Remove
- Rename
- Unload Project
- Change Target Platform...
- Properties

Device

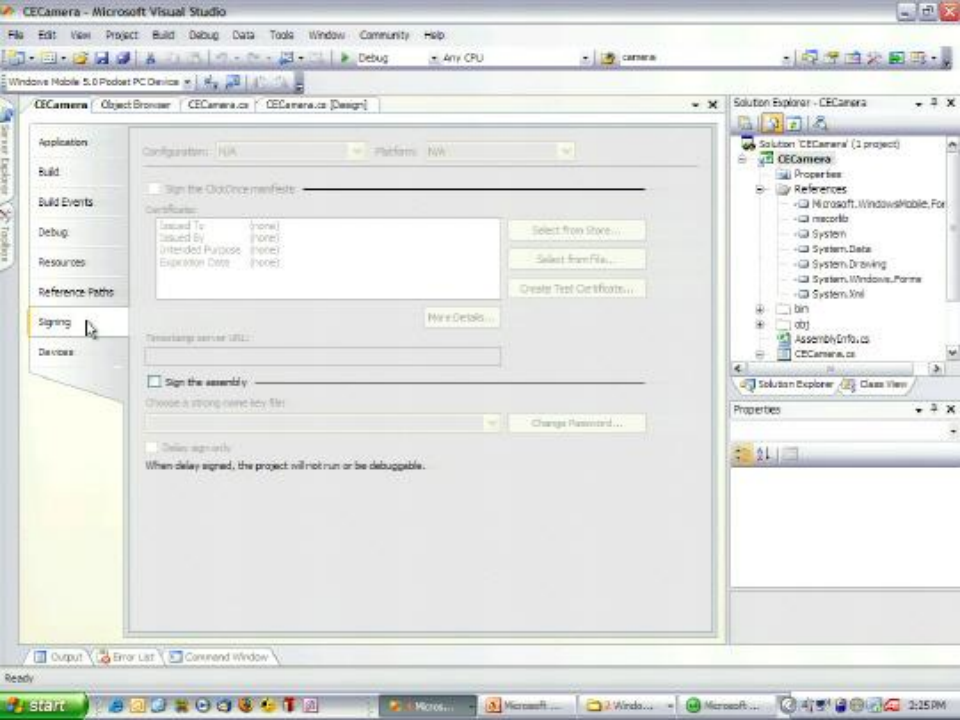
- Output File
- Platform
- Target Device

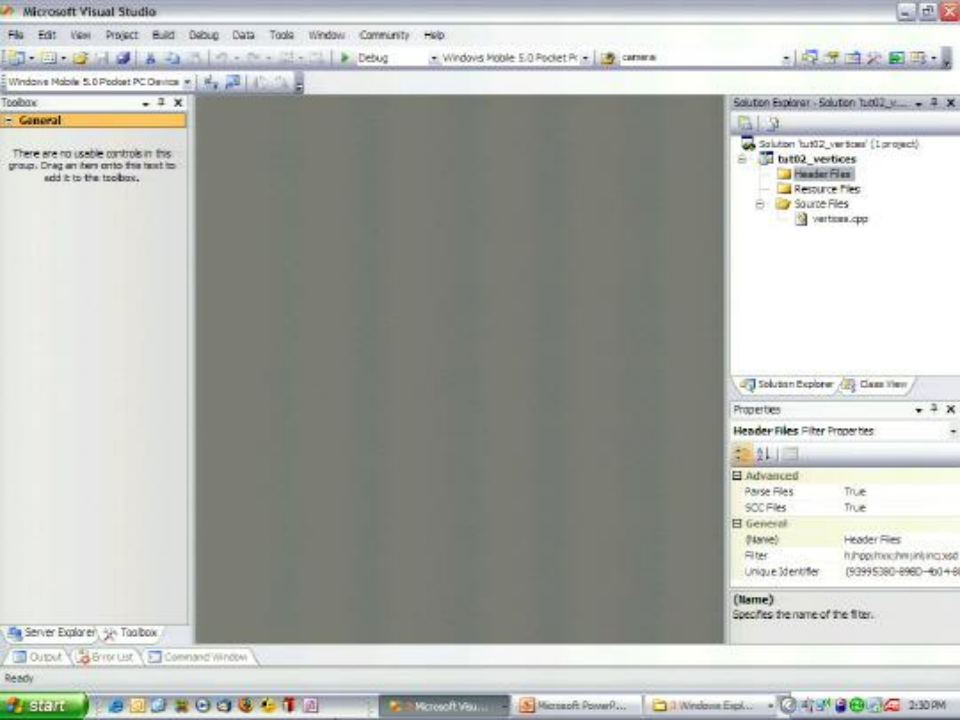
Misc

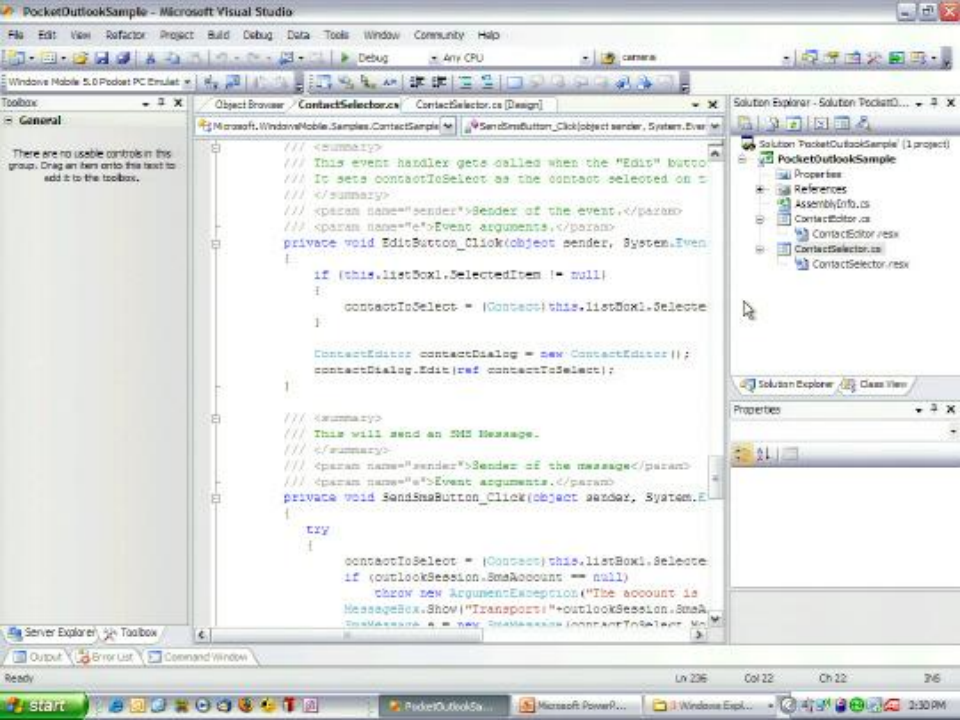
- NETCFVersion /2.0
- Project File CECamera.csproj

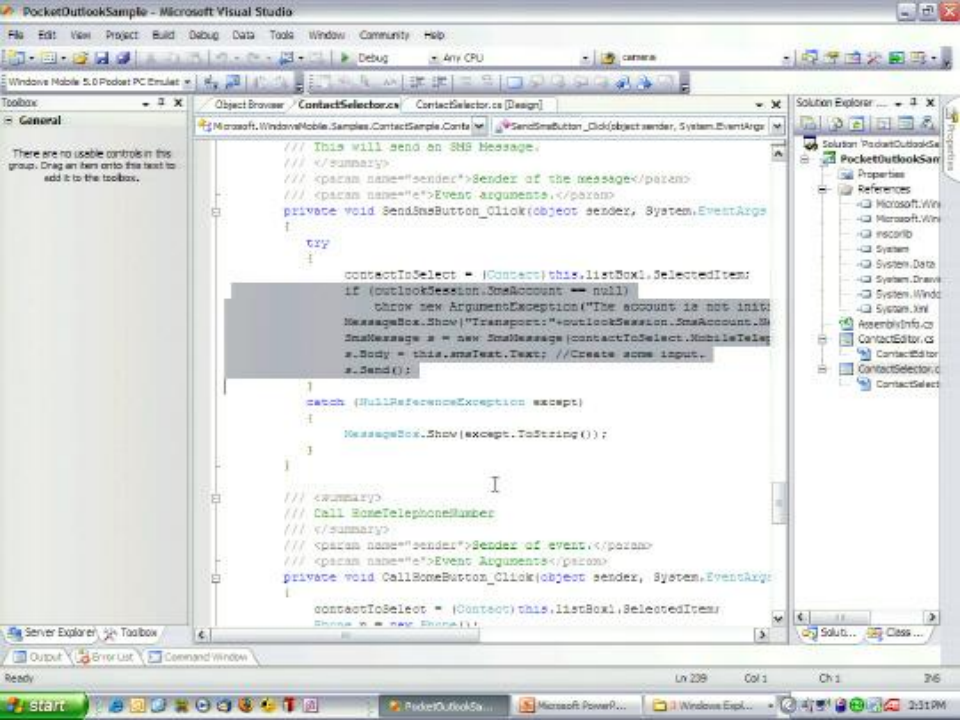
Output Error List Command Window

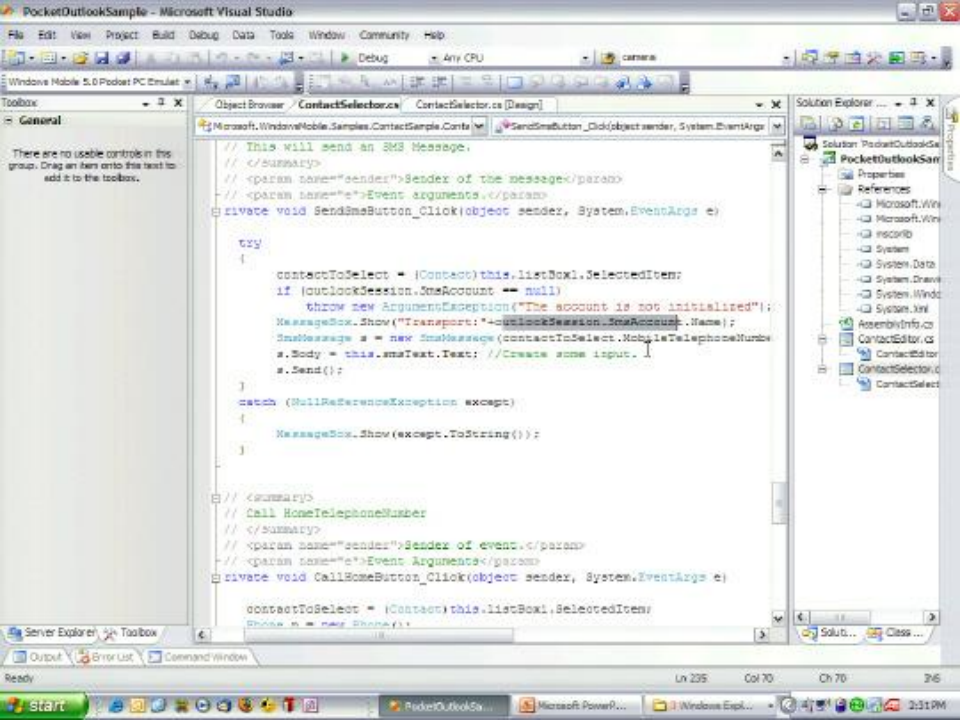
Ready

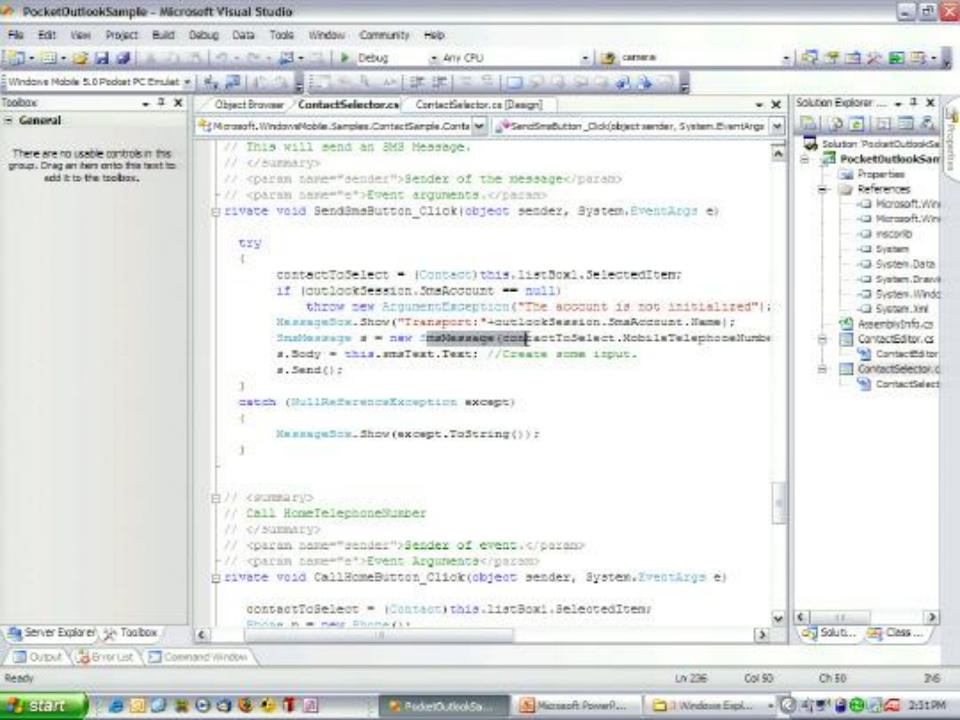


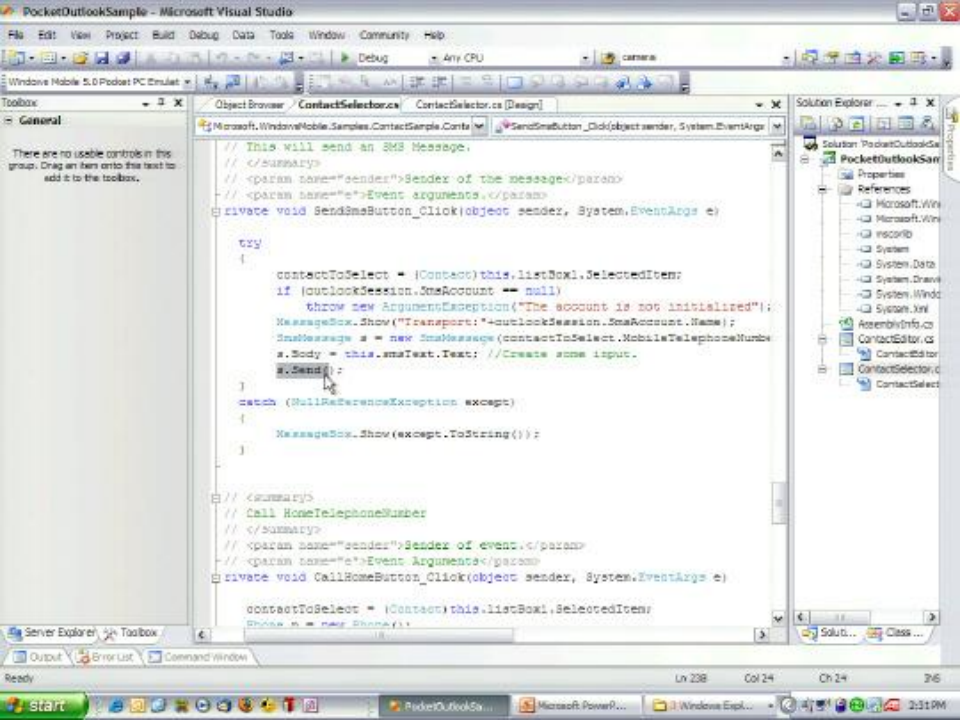


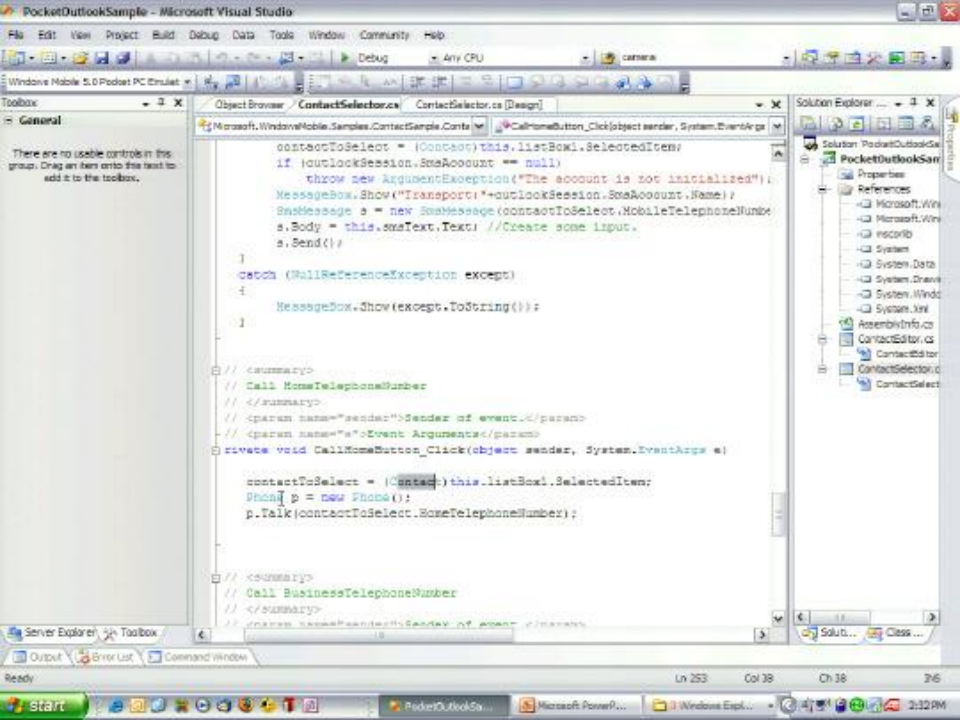












Futures

- Magneto release
 - Image Update
- More platform unification
- Componentization –Windows Mobile “Base”
- Releases
 - “EFP”
 - “Magton”
 - “Photon”

Release & Availability Timetable

MS CONFIDENTIAL

Magneto RTM	4/13/2005
Operator Trials	~ 3 months
Device Availability	<ul style="list-style-type: none">• 1 Partner – May• Others – Trickling in 6 – 9 months

Resources

Windows Mobile Dev Platform Website	http://devices/site/sdkweb
Visual Studio for Devices	http://vsd/
.NET CF	http://netcf
Mobile Developer Contest	http://devices/site/sdkweb/contest
Questions & Comments	mailto:mddevx@microsoft.com